

32. (New) A process for introducing pore surface functionality to a porous article, comprising the steps of:

providing a precursor porous article having an exterior surface, an interstitial surface and a bulk matrix, the exterior and interstitial surfaces and bulk matrix both comprising organic polymers, the porous article having an interconnected network of open pores, the open pores having pore surfaces extending from interior portions of the porous article to the exterior surface of the porous article and having exterior pore surfaces consisting of pore surfaces opening directly to the macroscopic external surface of the porous article, and having interstitial, internal pore surfaces interior to the porous article and contiguous with the exterior pore surfaces; and

exposing the precursor porous article to a flowing gas containing reactive atomic or molecular radicals, said radicals being produced by a flow of a source gas through a discharge region, spaced from the porous article, within which is a microwave, radiofrequency, or direct current gaseous discharge, the source gas being selected from the group consisting of oxygen, ammonia, carbon dioxide, nitrogen, hydrogen, or mixtures thereof, the gaseous flow being maintained such that atomic or molecular radicals are formed in the gaseous discharge and flow to the porous article in sufficient quantity that radicals from the discharge react with the organic polymers present at the exterior and interstitial surfaces of the precursor porous article to introduce direct covalent bonding of functionality to the surfaces, the functionality selected from the group consisting of amino, hydroxyl, carbonyl and carboxyl groups, and sufficient to introduce between 1×10^{-4} and 1×10^{-6} micromoles of reactive functionality per square cm of pore surface.

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